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### **REMARKS**

#### **Claim Status**

Claims 2, 9, 11, 18-94 and 97-103 stand canceled without prejudice or disclaimer as to the subject matter thereof;

claims 1, 3, 4, 5, 10, 13, 14 and 95 stand amended herein;

claim 96 is an original claim;

claims 6-8, 12, and 15-17 are re-presented herein without amendment;  
and

new claims 104-115 are presented for examination on the merits.

Applicant respectfully solicits entry and favorable consideration of the amendments and remarks tendered herewith so that the presently claimed invention may proceed to timely issuance as U.S. Letters Patent.

#### **Claim Rejections Under 35 U.S.C. §103**

Claims 1, 3-8, 10, 12-17, 95 and 96 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 5,549,717 to Takeuchi et al. ("Takeuchi") in view of U.S. Patent No. 5,439,760 to Howard et al. ("Howard"). Applicant asserts that following entry of this Amendment, and in view of the remarks herein, this ground of rejection stands traversed.

The Examiner has again rejected Applicant's arguments that Howard supports the claimed limitation of the anode current collector being shorter in length than the alkali strip metal. In particular, the Examiner states that the while Howard is concerned with the relative lengths of the cathode assembly and the anode assembly (i.e., the anode assembly is longer than the cathode assembly), nothing in Howard implies that the alkali strip 15 is longer than the anode current collector 5.

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Applicant has re-evaluated the reasoning employed by the Examiner in arriving at the position regarding Howard and now agrees with said position.

Applicant respectfully suggests that the amended claims clearly distinguish over Takeuchi (and Howard) and that the instant application fully supports the claim amendments submitted herewith. In particular, the Examiner appears to again attempted to base this rejection on the barest of text in Takeuchi; namely, col. 4, *line 39* (actually *line 41*: "current collector 68 has a length *slightly less* than the length of lithium strip 66" – emphasis added). Since the relationship of the dimensions of the anode and the current collector resides at the core of the present invention (i.e., on the order of 50-plus pages of text and 38 drawings), reliance upon two words and no drawings and no claims (and no other reference) strongly indicates that the present rejection is essentially unsupported.

The present rejection is devoid of any specific suggestion, motivation or teaching that would drive one of skill in the art to arrive at the claimed combination (i.e., in either Howard or Takeuchi) and, as a result the Examiner has failed to lodge a *prima facie* obviousness rejection that cannot stand.

In connection with combining references to support an assertion of obviousness, it is well established that the Examiner bears the burden of establishing a *prima facie* case of obviousness. In re Oetiker, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). In doing so, the Examiner must determine whether the prior art provides a "teaching or suggestion to one of ordinary skill in the art to make the changes that would produce" the claimed invention. In re Chu, 36 USPQ2d 1089, 1094 (Fed. Cir. 1995). A *prima facie* case of obviousness is established only when this burden is met.

The burden is still on the Examiner even when the Examiner relies upon a single reference. "Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the

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teachings of that reference." In re Kotzab, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000).

In the case of In re Lee, 61 USPQ2d 1430 (Fed. Cir. 2002), the Federal Circuit stated: "This factual question of motivation is material to patentability, and [can] not be resolved on subjective belief and unknown authority." *Id.* at 1434. Determination of patentability must be based on evidence, *id.* at 1434, and the Examiner provided none: no references pertaining to aggregation or averaging were cited, no official notice was taken, no evidence of any kind was presented. The Examiner's failure to present an evidentiary basis for the decision is clearly a legal error. *Id.* Assertions such as "common knowledge and common sense," even if assumed to derive from the Examiner's expertise, are not evidence, and conclusory statements do not fulfill the Examiner's obligation to make an evidentiary record. *Id.* at 1434-35; In re Dembiczak, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

If indeed the elements were known in the art, then the Examiner ought to present evidence to support that conclusion. In re Lee, 61 USPQ2d at 1435 ("[W]hen they rely on what they assert to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record."). The failure to do so renders the Examiner's rejection arbitrary, capricious and unreasonable. See id. at 1434. The Examiner may not arbitrarily, capriciously and unreasonably deny a claim by a mere declaration of obviousness without a supporting evidentiary record.

The Examiner presented no evidence of any suggestion or motivation to modify the Wilson techniques to arrive at the claimed invention. Nor has the Examiner presented any evidence that the recited elements are known in the art. The record consists exclusively of conclusory statements by the Examiner, which are not evidence and which cannot support rejections under 35 U.S.C. § 103.

For at least these reasons, the Examiner has failed to establish a *prima facie* case for non-patentability of Applicant's claims 1, 3-8, 10, 12-17, 95 and 96 under 35 U.S.C. § 103(a). Withdrawal of this ground of rejection is hereby

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earnestly and respectfully requested. Since new claims 104-115 also include limitations distinguishing each over the prior art of record, Applicant respectfully suggests that they too are patentable over the art.

Applicant asserts that the claimed invention includes limitations regarding a markedly ("substantially") shorter anode current collector vis-à-vis the alkali or lithium anode member that is nowhere found in either Howard or Takeuchi. Applicant has herewith amended the pending claims to include such a limitation and respectfully suggests that a fair reading of Takeuchi cannot be deemed to include any such limitation or teaching. In support of the foregoing, in the instant application as filed at the Summary of the Invention section (at page 7, lines 7-14), the following passages appear:

In a preferred embodiment of the present invention, at least corresponding adjacent ends of the first and second portions of alkali metal are disposed on either side of, and pressed upon, a metal or alloy anode current collector, where the anode current collector has a length less than those corresponding to the first and second portions of alkali metal. The anode current collector may range in length anywhere between the full lengths corresponding to the first and second alkali metal portions and a length substantially shorter than the full length of the alkali metal portions yet longer than the length associated with the one anode current collecting tab only. (emphasis added.)

Also, at page 12 the following passage provides support for the presently claimed invention.

In still another embodiment of the present invention, anode current collector 5 is characterized in having length L and height H, either one or both of which may be less than the corresponding length L or height H of cathode current collector 55 and/or less than the lengths or heights corresponding to alkali metal strips 10 or 15 pressed or disposed on anode current collector 5. (emphasis added.)

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Beginning at the end of page 25 and extending to page 26, the following passage (and drawings recited) provide additional support for the claimed invention.

A second group of seven spirally wound test cells was built using shortened anode current collector 5 of Figure 24A. Cells of the second group are referred to as cells 8 through 14 herein. In the second group of cells, corresponding ends of first and second portions of lithium were aligned and then embedded in shortened current collector 5 of Figure 24A such that shortened current collector 5 was disposed in only that portion of anode assembly 1 forming the outer wrap or outer layer in a spirally wound cell.

The new claims submitted herewith are wholly supported in the application as filed (e.g., for those claims reciting perforated and non-perforated current collectors), to wit.

The present invention is also not limited to shortened anode current collectors of constant thickness in spirally wound electrode assemblies *per se*, but includes within its scope anode current collectors having varying thicknesses, different stiffnesses and different grid patterns. Additionally, the anode current collector of the present invention is not limited to embodiments having connector tabs attached to an edge of a gridded current collector or to a screen-like current collector, but instead includes within its scope anode current collectors forming with the connector tab a single imperforate piece of metal as well as current collectors having holes formed therein by punching, stamping, rolling, chemical etching and other means.

Accordingly, there are no teachings of the present invention in the prior art and it is therefore respectfully requested that the rejections be withdrawn.

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### Claim Objections

Claim 1 and 102 stand objected to for informalities that the Examiner was kind enough to point out to Applicant. Said informalities are fully addressed with the present Amendment and rendered moot.

### Double Patenting

Claims 102 and 103 stand rejected under 35 U.S.C. §101 for statutory double patenting. Since these claims are herewith canceled this ground of rejection is rendered moot and no further response is required.

### Conclusion


There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned attorney to attend to these matters.

Respectfully submitted,

Date:

26 May '04



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